

FIG. 1

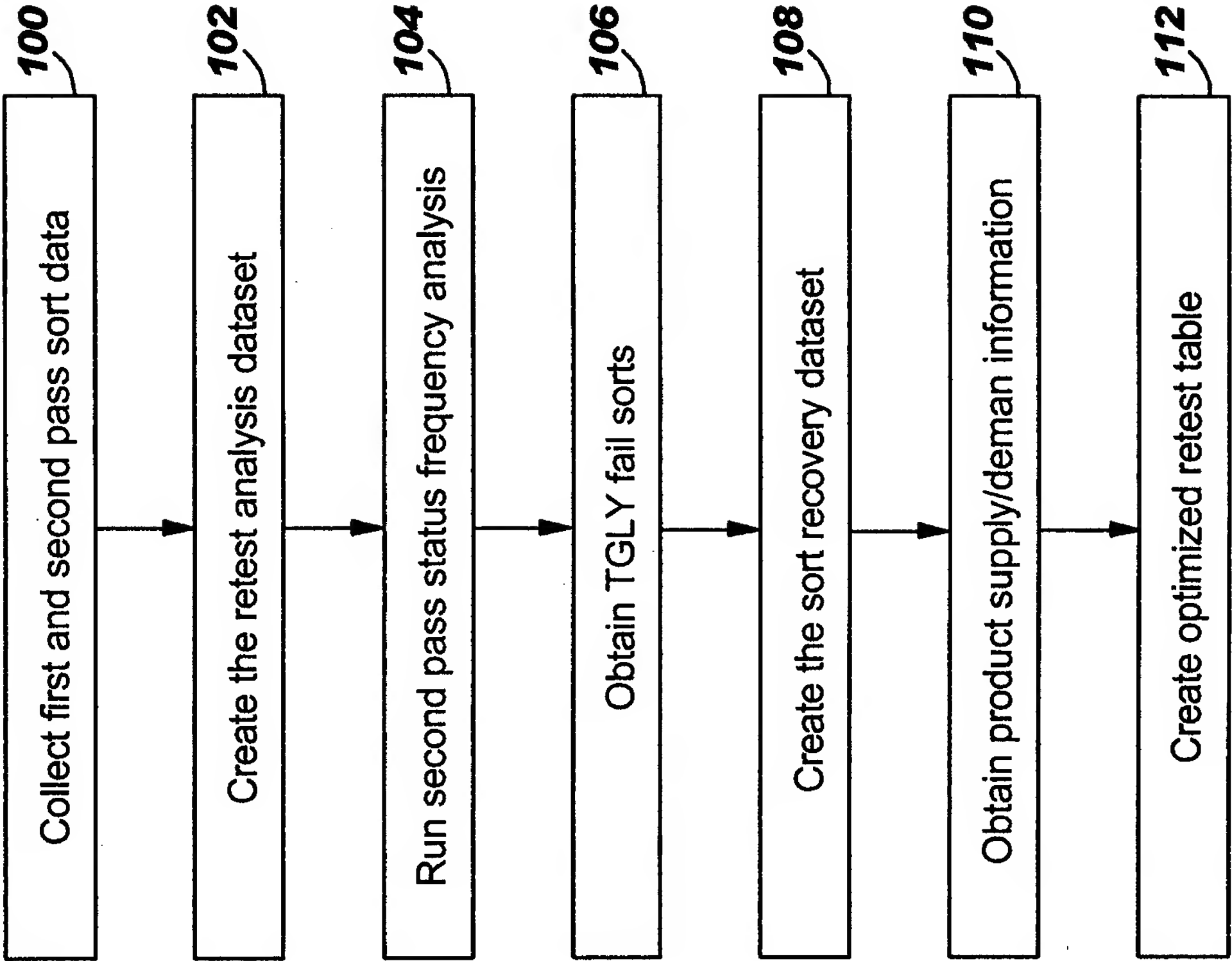


FIG. 2

1<sup>st</sup> Pass Test Sorts

Lot ID	WaferID	CHIP X	CHIP Y	Suffix	sort	Description
Lot001	WaferA	1	1	RWJ1	2	Contact Opens
Lot001	WaferA	1	2	RWJ1	1	GOOD
Lot001	WaferA	1	3	RWJ1	3	Contact Shorts
Lot001	WaferA	1	4	RWJ1	6	Leakage
Lot001	WaferA	1	5	RWJ1	20	Func 2

FIG. 3

2<sup>dn</sup> Pass Test Sorts

Lot ID	WaferID	CHIP X	CHIP Y	Suffix	sort	Description
Lot001	WaferA	1	1	RWJ2	11	PLL Fail
Lot001	WaferA	1	3	RWJ2	1	GOOD
Lot001	WaferA	1	4	RWJ2	6	Leakage
Lot001	WaferA	1	5	RWJ2	8	Cat2_Good

FIG. 4

Combined 1<sup>st</sup> & 2<sup>nd</sup> Pass Test Sorts

Lot ID	WaferID	CHIP X	CHIP Y	1 <sup>st</sup> PASS SORT	2 <sup>nd</sup> PASS SORT	Description
Lot001	WaferA	1	1	2	11	BAD
Lot001	WaferA	1	2	1	*	1st PASS GOOD
Lot001	WaferA	1	3	3	1	GOOD
Lot001	WaferA	1	4	6	6	BAD
Lot001	WaferA	1	5	20	8	Cat2_GOOD

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## FIG. 5

Results of Freq. Analysis:

Sort	Description	BAD	Cat 2 Good	Good	TOTAL
2	Contact Opens	3	43	25	71
3	Contact Shorts	2	9	5	16
6	Leakage	2			2
10	ECID	24	2	2	28
11	PLL	6	1	2	9
14	Probe Melt	1	5	2	8
19	Func 1	31	1	1	33
20	Func 2	31		1	32
21	Func 3	10	1		11
22	Func 4	5			5
24	Contact IO Opens	1	4	10	15
26	Func 5	4	1		5
27	Func 6	32	3	1	36
28	Func 7	1			1
29	Func 8	0		1	1
34	Func 9	7			7
38	Func 10	1			1
40	ABIST 1	59	2		61
41	ABIST 2	14	1	1	16

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FIG. 6

TGYL Fail Sorts:

Sort	Description	TGYL Fail?
2	Contact Opens	Y
3	Contact Shorts	Y
6	Leakage	Y
14	Probe Melt	Y
24	Contact IO Opens	Y

FIG. 7

Non-TGYL Fail Sorts:

Sort	Description	TGYL Fail?
10	ECID	N
11	PLL	N
19	Func 1	N
20	Func 2	N
21	Func 3	N
22	Func 4	N
26	Func 5	N
27	Func 6	N
28	Func 7	N
29	Func 8	N
34	Func 9	N
38	Func 10	N
40	ABIST 1	N
41	ABIST 2	N

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## FIG. 8

SORT RECOVERY DATASET:

Sort	Description	TGYL Fail?	BAD	Cat 2 Good	Good
2	Contact Opens	Y	3	43	25
3	Contact Shorts	Y	2	9	5
6	Leakage	Y	2		
10	ECID		24	2	2
11	PLL		6	1	2
14	Probe Melt	Y	1	5	2
19	Func 1		31	1	1
20	Func 2		41		1
21	Func 3		10	1	
22	Func 4		5		
24	Contact IO Opens	Y	1	4	10
26	Func 5		4	1	
27	Func 6		32	3	1
28	Func 7		1		
29	Func 8		0		1
34	Func 9		7		
38	Func 10		1		
40	ABIST 1		59	2	
41	ABIST 2		14	1	1

## FIG. 9

CUSTOMER DEMAND SORT TABLE:

Sort	Description	Customer Demand
1	GOOD	Y
8	CAT2_GOOD	NO_DEMAND

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## FIG. 10

### OPTIMIZED RETEST SORT TABLE:

Retest all TGUL fails and only Good sorts. In this case, no demand for Cat2\_Good.

Sort	Description	TGYL Fail?	BAD	Cat 2 Good	Good	Retest Sort?	TOTAL
2	Contact Opens	Y	3	43	25	Y	71
3	Contact Shorts	Y	2	9	5	Y	16
6	Leakage	Y	2			Y	2
10	ECID		24	2	2	Y	28
11	PLL		6	1	2	Y	9
14	Probe Melt	Y	1	5	2	Y	8
19	Func 1		31	1	1	Y	33
20	Func 2		31		1	Y	32
21	Func 3		10	1			11
22	Func 4		5				5
24	Contact IO Opens	Y	1	4	10	Y	15
26	Func 5		4	1			5
27	Func 6		32	3	1	Y	36
28	Func 7		1				1
29	Func 8		0		1	Y	1
34	Func 9		7				7
38	Func 10		1				1
40	ABIST 1		59	2			61
41	ABIST 2		14	1	1	Y	16

FIG. 11

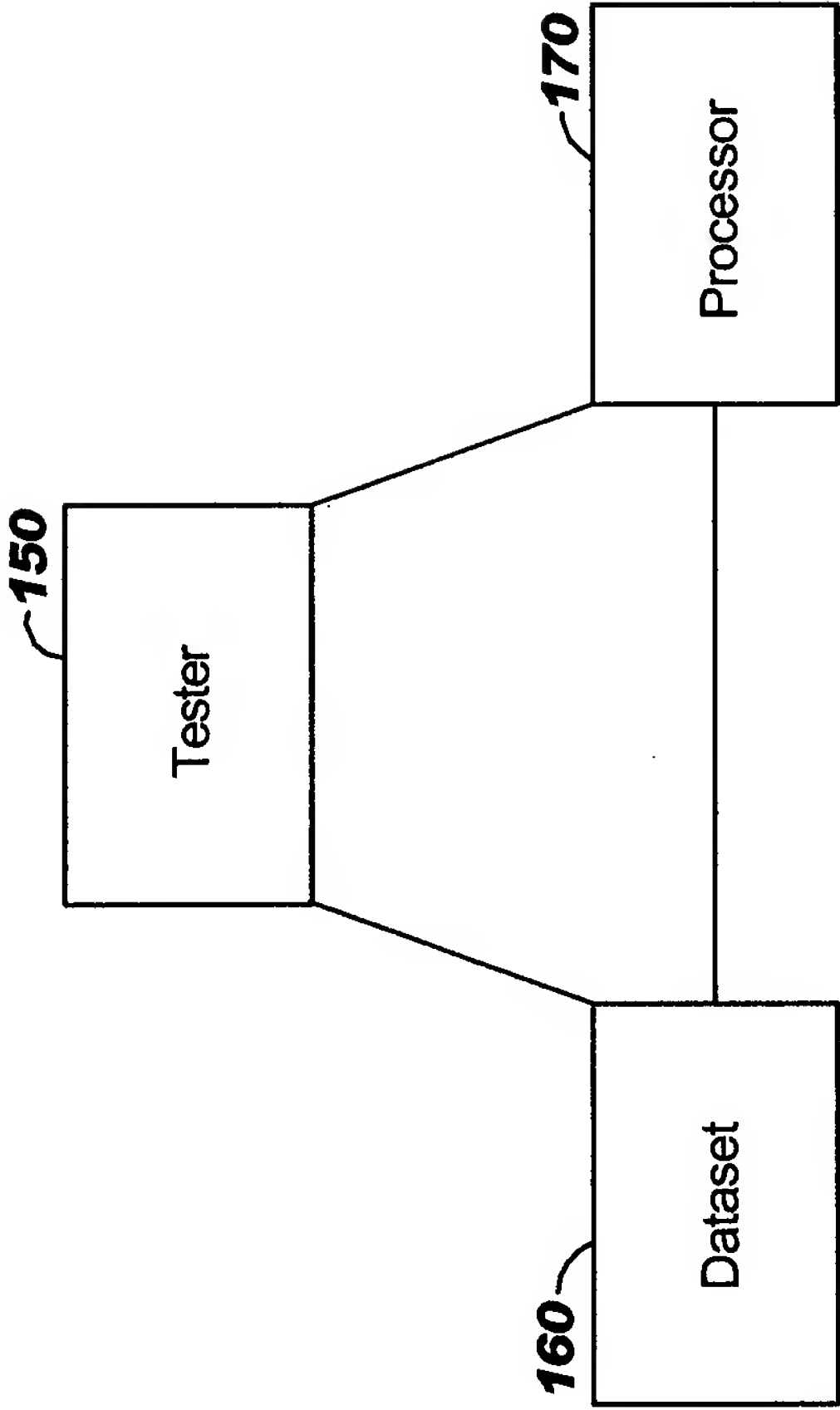




FIG. 12

